

chain nodes :

24

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
22 23 26 27 28 29 30 31

chain bonds :

19-24

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 7-10 8-9 8-13 10-11
10-14 11-12 11-16 12-13 12-17 13-19 14-15 15-16 17-18 17-20
18-19 18-23 20-21 21-22 22-23 26-27 26-31 27-28 28-29 29-30
30-31

exact/norm bonds :

5-7 6-9 8-9 10-14 11-16 12-17 13-19 14-15 15-16 17-18 17-20
18-19 18-23 20-21 21-22 22-23 26-27 26-31 27-28 28-29 29-30
30-31

exact bonds :

19-24

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-10 8-13 10-11 11-12 12-13

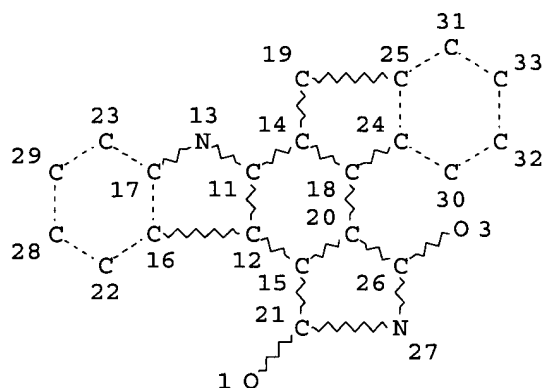
isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom
10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom
18:Atom

	19:Atom	20:Atom	21:Atom	22:Atom	23:Atom	24:CLASS	26:Atom
27:Atom	28:Atom	29:Atom	30:Atom	31:Atom	32:CLASS		



ENTER (DIS), GRA, NOD, BON OR ?:end
L7 STRUCTURE CREATED

=> s 17
SAMPLE SEARCH INITIATED 08:45:23 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 164 TO ITERATE

100.0% PROCESSED 164 ITERATIONS
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 2512 TO 4048
PROJECTED ANSWERS: 0 TO 0

L8 0 SEA SSS SAM L7

=> s 17 ful
FULL SEARCH INITIATED 08:45:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3354 TO ITERATE

100.0% PROCESSED 3354 ITERATIONS
SEARCH TIME: 00.00.02

26 ANSWERS

L9 26 SEA SSS FUL L7

=> s 19

L10 10 L9

=> d bib abs 1-10

L10 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 2002:142907 CAPLUS

DN 136:194260

TI Methods for modulating multiple lineage kinase proteins and screening compounds which modulate multiple lineage kinase proteins

IN Maroney, Anna; Walton, Kevin M.; Dionne, Craig A.; Neff, Nicola; Knight, Ernest, Jr.; Glicksman, Marcie A.

PA Cephalon, Inc., USA

SO PCT Int. Appl., 114 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002014536	A2	20020221	WO 2001-US24822	20010808
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI US 2000-637054 A 20000811

OS MARPAT 136:194260

AB Methods for identifying compds. which modulate activity of a multiple lineage kinase protein and promotes cell survival or cell death comprising the steps of contacting the cell contg. the multiple lineage protein with the compd., detg. whether the compd. decreases activity of the multiple lineage protein, and detg. whether the compd. promotes cell survival are provided. Methods for identifying compds. which may be useful in the treatment of neurodegenerative disorders and/or inflammation are also provided. Methods for modulating the activity of a multiple lineage kinase protein comprising contacting the protein or a cell contg. the protein with an indeno- or indolo-compd. of the invention are also provided. Methods of treating neurodegenerative disorders and/or inflammation are also provided.

L10 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 2000:573797 CAPLUS

DN 133:177158

TI Preparation of cyclic substituted fused pyrrolocarbazoles and isoindolones with protein kinase inhibiting activity for pharmaceutical use

IN Hudkins, Robert L.; Reddy, Dandu; Singh, Jasbir; Stripathy, Rabindranath; Underiner, Theodore L.

PA Cephalon, Inc., USA

SO PCT Int. Appl., 131 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000047583	A1	20000817	WO 2000-US3476	20000211
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,			

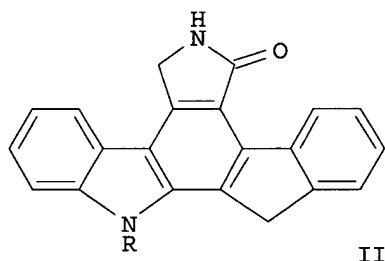
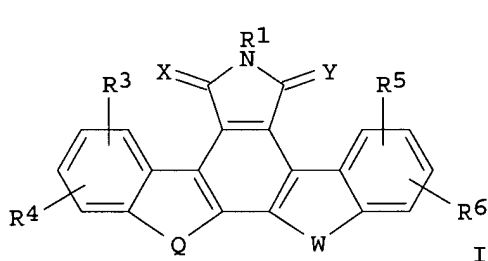
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MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1165562 A1 20020102 EP 2000-911759 20000211
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

BR 2000008056 A 20020409 BR 2000-8056 20000211
NO 2001003887 A 20011011 NO 2001-3887 20010809

PRAI US 1999-119834P P 19990212
US 2000-500849 A 20000210
WO 2000-US3476 W 20000211

OS MARPAT 133:177158
GI



AB Fused pyrrolocarbazoles and isoindolones, such as I [R1 = H, alkyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl; R3-6 = H, CN, CF3, OH, CH2OH, halogen, aryl, heteroaryl, acyl, acyloxy, amino, etc.; Q = O, S, NR7; W = CR8R9; X, Y = H2, O; R7 = H, alkyl, heterocyclalkyl, etc.; R8, R9 = H, OH, cycloalkyl, cycloalkylmethyl, heterocyclalkyl, heterocyclalkyl, etc.], were prepd. for use as agents for the regulation of protein kinase and for the treatment of prostate disorders, neoplasia, rheumatoid arthritis, pulmonary fibrosis, etc. Thus, II (R = oxiranylmethyl) was prepd. in 71% yield by via reaction of (.+-.)-glycidyl mesylate and Rink's acid resin bound 6,7,12,13-tetrahydro-5H-indeno[2,1-a]pyrrolo[3,4-c]carbazol-5-one. The prepd. compds. were tested for inhibitory activity against a variety of protein kinases, such as trkA tyrosine kinase, vascular endothelial growth factor receptor kinase, protein kinase C, etc.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 2000:227509 CAPLUS

DN 132:260705

TI Methods using fused pyrrolocarbazole compounds for preventing/treating damage to sensory hair cells and cochlear neurons

IN Ylikoski, Jukka; Pirvola, Ulla; Saarma, Mart; Walton, Kevin; Hudkins, Robert L.

PA Cephalon, Inc., USA

SO PCT Int. Appl., 232 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000018407	A1	20000406	WO 1999-US21780	19990924

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9960532 A1 20000417 AU 1999-60532 19990924

EP 1126855 A1 20010829 EP 1999-969678 19990924

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

PRAI US 1998-101763P P 19980925

WO 1999-US21780 W 19990924

OS MARPAT 132:260705

AB Methods for preventing or treating damage to sensory hair cells and cochlear neurons are disclosed. The methods comprise the administration of an effective amt. of a fused pyrrolocarbazole compd. (Markush included). The method provides for the prevention/treatment of both hearing loss and loss of the sense of balance. Prepn. of compds. of the invention is described.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 2000:161543 CAPLUS

DN 132:217150

TI Methods for identification of compounds modulating multiple lineage kinase proteins, compound preparation, and therapeutic use

IN Maroney, Anna; Walton, Kevin M.; Dionne, Craig A.; Neff, Nicola; Knight, Ernest, Jr.; Glicksman, Marcie A.

PA Cephalon, Inc., USA

SO PCT Int. Appl., 158 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2000013015	A1	20000309	WO 1999-US18864	19990818
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W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,
KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9956793 A1 20000321 AU 1999-56793 19990818

EP 1105728 A1 20010613 EP 1999-943759 19990818

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

BR 9913190 A 20011211 BR 1999-13190 19990818

NO 2001000389 A 20010402 NO 2001-389 20010123

PRAI US 1998-97980P P 19980826

WO 1999-US18864 W 19990818

OS MARPAT 132:217150

AB Methods for identifying compds. which modulate activity of a multiple lineage kinase protein and promotes cell survival or cell death comprise contacting the cell contg. the multiple lineage kinase protein with the compd., detg. whether the compd. decreases activity of the multiple lineage kinase protein, and detg. whether the compd. promotes cell

survival are provided. Methods for identifying compds. which may be useful in the treatment of neurodegenerative disorders and/or inflammation are also provided. Methods for modulating the activity of a multiple lineage kinase protein comprising contacting the protein or a cell contg. the protein with an indeno- or indolo- compd. of the invention are also provided. Methods of treating neurodegenerative disorders and/or inflammation are also provided.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 1999:783942 CAPLUS

DN 132:23129

TI Bridged indenopyrrolocarbazoles

IN Singh, Jasbir; Hudkins, Robert L.; Mallamo, John P.; Underiner, Theodore L.; Tripathy, Rabindranath

PA Cephalon, Inc., USA

SO PCT Int. Appl., 90 pp.

CODEN: PIXXD2

DT Patent

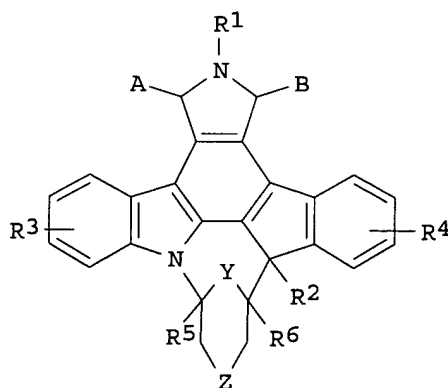
LA English

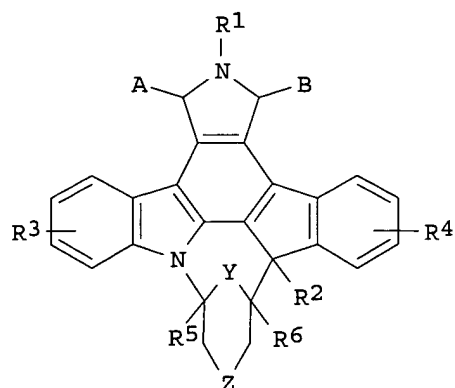
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9962523	A1	19991209	WO 1999-US12531	19990604
	W:				
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	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6127401	A	20001003	US 1999-325140	19990603
	AU 9944188	A1	19991220	AU 1999-44188	19990604
	AU 744900	B2	20020307		
	EP 1083903	A1	20010321	EP 1999-927234	19990604
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	BR 9910908	A	20011002	BR 1999-10908	19990604
	US 6359130	B1	20020319	US 2000-572160	20000517
	NO 2000006166	A	20010207	NO 2000-6166	20001204
PRAI	US 1998-88114P	P	19980605		
	US 1999-325140	A	19990603		
	WO 1999-US12531	W	19990604		

OS MARPAT 132:23129

GI





I

AB Synthesis and activity of bridged indenopyrrolocarbazoles (I) [R1 = H, (un)substituted alkyl, (un)substituted aryl, (un)substituted arylalkyl, (un)substituted heteroaryl, (un)substituted heteroarylalkyl, acyl, (un)substituted OH, (un)substituted CONH2; R2 = H, (un)substituted alkyl, (un)substituted OH, (un)substituted arylalkyl, (un)substituted heteroarylalkyl; R3 and R4 independently = H, aryl, heteroaryl, F, Cl, Br, I, CN, CF3, NO2, (un)substituted OH, (un)substituted O acyl, (un)substituted NH2, (un)substituted NHSO3H, (un)substituted NH acyl, (un)substituted alkyl; R5 and R6 independently = H, (un)substituted alkyl, (un)substituted arylalkyl, (un)substituted heteroarylalkyl; Y = O, S, (un)substituted NH, CH2; Z = bond, O, CH=CH, S, CO, (un)substituted CH(OH); A and B = 2H, O, S, (un)substituted N with the proviso that one of them is O] is disclosed. I are useful in the treatment of numerous diseases.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 1998:31143 CAPLUS

DN 128:114942

TI Preparation of fused pyrrolocarbazoles as drugs.

IN Hudkins, Robert L.; Knight, Ernest, Jr.

PA Cephalon, Inc., USA

SO U.S., 51 pp. Cont.-in-part of U.S. 5,594,009.

CODEN: USXXAM

DT Patent

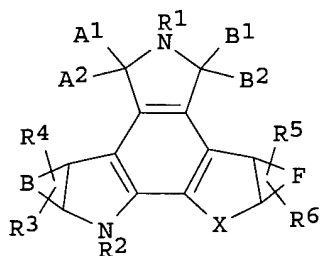
LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5705511	A	19980106	US 1995-526798	19950911
	US 5475110	A	19951212	US 1994-323755	19941014
	US 5591855	A	19970107	US 1995-427160	19950424
	US 5594009	A	19970114	US 1995-452335	19950526
	WO 9611933	A1	19960425	WO 1995-US12761	19951003
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LT, LV, MG, MX, NO, NZ, PL, RO, RU, SG, SK, TJ, TT, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9539986	A1	19960506	AU 1995-39986	19951003
	AU 705306	B2	19990520		
	EP 785938	A1	19970730	EP 1995-938713	19951003
	EP 785938	B1	20020102		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	BR 9509348	A	19971104	BR 1995-9348	19951003
	EP 1088823	A1	20010404	EP 2000-204170	19951003
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, LT, LV

JP 2001509775	T2	20010724	JP 1996-513289	19951003
AT 211472	E	20020115	AT 1995-938713	19951003
FI 9701479	A	19970611	FI 1997-1479	19970409
NO 9701677	A	19970611	NO 1997-1677	19970411
PRAI US 1994-323755	A2	19941014		
US 1995-427160	A2	19950424		
US 1995-452335	A2	19950526		
US 1995-526798	A	19950911		
EP 1995-938713	A3	19951003		
WO 1995-US12761	W	19951003		
OS MARPAT 128:114942				
GI				



I

AB Title compds. [I; B, F = atoms to form unsatd. 5-6 membered (hetero)cycles; R1 = H, alkyl, aryl, aralkyl, heteroaryl, heteroaralkyl, acyl; R2 = H, acyl, alkyl, alkenyl, alkynyl, (substituted) monosaccharide residue; R3-R6 = H, aryl, heteroaryl, halo, cyano, CF₃, NO₂, (substituted) OH, amino, etc.; A1, A2, B1, B2 = (H, H), (H, OR₁₁), (H, SR₁₁), [H, N(R₁₁)₂]; A1A2, B1B2 = O, S, NR₁₁; R₁₁ = H, alkyl, aryl, heteroaryl; X = (substituted) alkylene, CH:CH, O, S, SO, SO₂, CO, etc.; with provisos], were prepd. for effecting the function and/or survival of trophic factor responsive cells; inhibition of enzymic activity; inhibition of inflammation-assocd. responses; inhibition of cell growth assocd. with hyperproliferative states; and inhibition of developmentally programmed motoneuron death. Thus, 3-fluoro-5H,6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]carbazole-7-one (prepn. given) at 250 nM increased choline acetyltransferase activity in rat fetal basal forebrain prepn. by 389%.

L10 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 1997:70359 CAPLUS

DN 126:171583

TI Preparation of indeno[2,3-a]pyrrolo[3,4-c]carbazolediones and analogs as drugs

IN Hudkins, Robert L.; Knight, Ernest, Jr.

PA Cephalon, Inc., USA

SO U.S., 46 pp. Cont.-in-part of U.S. Ser. No. 427, 160.

CODEN: USXXAM

DT Patent

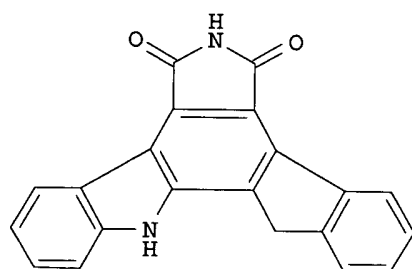
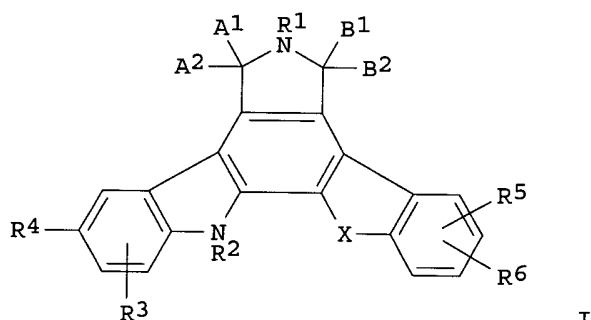
LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5594009	A	19970114	US 1995-452335	19950526
	US 5475110	A	19951212	US 1994-323755	19941014
	US 5591855	A	19970107	US 1995-427160	19950424
	US 5705511	A	19980106	US 1995-526798	19950911
	WO 9611933	A1	19960425	WO 1995-US12761	19951003

W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LT, LV, MG, MX, NO, NZ, PL, RO, RU, SG, SK, TJ, TT, UA, UZ, VN

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 AU 9539986 A1 19960506 AU 1995-39986 19951003
 AU 705306 B2 19990520
 EP 785938 A1 19970730 EP 1995-938713 19951003
 EP 785938 B1 20020102
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
 BR 9509348 A 19971104 BR 1995-9348 19951003
 EP 1088823 A1 20010404 EP 2000-204170 19951003
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, LT, LV
 JP 2001509775 T2 20010724 JP 1996-513289 19951003
 AT 211472 E 20020115 AT 1995-938713 19951003
 FI 9701479 A 19970611 FI 1997-1479 19970409
 NO 9701677 A 19970611 NO 1997-1677 19970411
 PRAI US 1994-323755 A2 19941014
 US 1995-427160 A2 19950424
 US 1995-452335 A2 19950526
 US 1995-526798 A 19950911
 EP 1995-938713 A3 19951003
 WO 1995-US12761 W 19951003
 OS MARPAT 126:171583
 GI

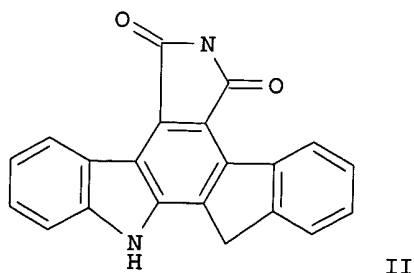
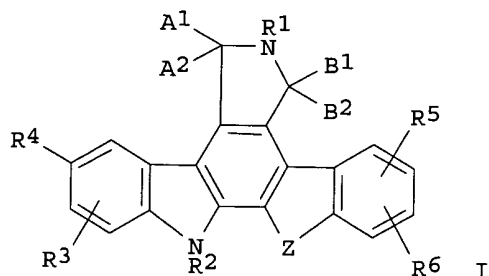


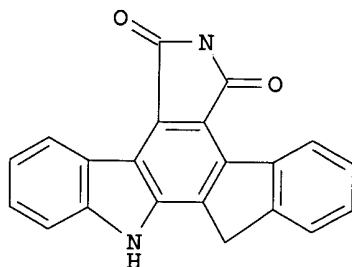
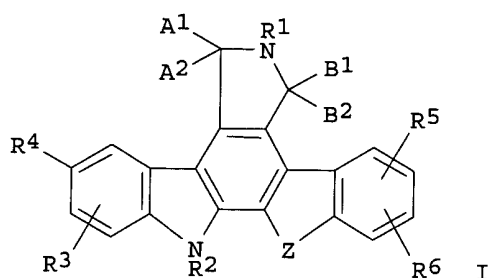
AB Title compds. [I; A1,A2,B1,B2 = H, OH, alkoxy, etc.; A1A2, B1B2 = O; R1 = H, alkyl, (hetero)aryl(alkyl), alkanoyl, etc.; R2 = H, alkyl(sulfonyl), alkoxy, carbonyl, etc.; R3-R6 = H, halo, alkyl, alkoxy, etc.; X = alkylene, O, S, CH:CH, etc.] were prepd. as neuronal cell protectants, trophic factor enhancers, protein kinase C and tyrosine kinase inhibitors, etc. Thus, 2-indanone was alkylated with indole and the dehydrated product cyclocondensed with maleimide to give, after dehydrogenation, title compd. II. Data for biol. activity of I were given.

L10 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2002 ACS
 AN 1997:49296 CAPLUS
 DN 126:157494
 TI Preparation of indeno[2,1-a]pyrrolo[3,4-c]carbazoles and analogs as drugs

IN Hudkins, Robert L.; Knight, Ernest, Jr.
 PA Cephalon, Inc., USA
 SO U.S., 40 pp. Cont.-in-part of U.S. 5,475,110.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5591855	A	19970107	US 1995-427160	19950424
	US 5475110	A	19951212	US 1994-323755	19941014
	US 5594009	A	19970114	US 1995-452335	19950526
	US 5705511	A	19980106	US 1995-526798	19950911
	WO 9611933	A1	19960425	WO 1995-US12761	19951003
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LT, LV, MG, MX, NO, NZ, PL, RO, RU, SG, SK, TJ, TT, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9539986	A1	19960506	AU 1995-39986	19951003
	AU 705306	B2	19990520		
	EP 785938	A1	19970730	EP 1995-938713	19951003
	EP 785938	B1	20020102		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	BR 9509348	A	19971104	BR 1995-9348	19951003
	EP 1088823	A1	20010404	EP 2000-204170	19951003
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, LT, LV				
	JP 2001509775	T2	20010724	JP 1996-513289	19951003
	AT 211472	E	20020115	AT 1995-938713	19951003
	FI 9701479	A	19970611	FI 1997-1479	19970409
	NO 9701677	A	19970611	NO 1997-1677	19970411
PRAI	US 1994-323755	A2	19941014		
	US 1995-427160	A2	19950424		
	US 1995-452335	A2	19950526		
	US 1995-526798	A	19950911		
	EP 1995-938713	A3	19951003		
	WO 1995-US12761	W	19951003		
OS	MARPAT 126:157494				
GI					





II

AB Title compds. [I; A1,A2,B1,B2 = H and OR11, H and N(R11)2, etc.; A1A2,B1B2 = H2, O, S, NR11; R1 = H, alkyl, (hetero)aryl(alkyl), etc.; R2 = H, alkyl, alkoxy, etc.; R3-R6 = H, halo, alkyl, alkoxy, etc.; R11 = H, alkyl, aryl, etc.; Z = O, S, CH2, CH:CH, CO, etc.] were prepd. as neuronal cell survival promoters, protein kinase inhibitors, antiproliferatives, antiinflammatories, etc. Thus, indole was condensed with 2-indanone and the dehydrated product cyclocondensed with maleimide to give, after DDQ dehydrogenation, title compd. II. Data for biol. activity of I were given.

L10 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 1996:457759 CAPLUS

DN 125:114935

TI Preparation of fused pyrrolocarbazoles as inhibitors of protein kinase C and protein tyrosine kinase

IN Hudkins, Robert L.; Knight, Ernes, Jr.

PA Cephalon, Inc., USA

SO PCT Int. Appl., 160 pp.

CODEN: PIXXD2

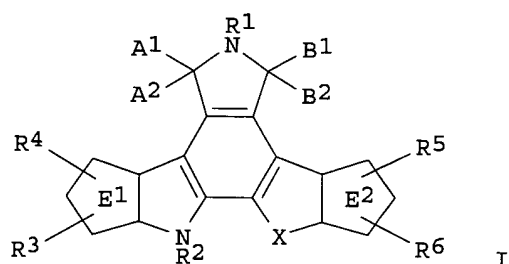
DT Patent

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9611933	A1	19960425	WO 1995-US12761	19951003
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RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5475110	A	19951212	US 1994-323755	19941014
US 5591855	A	19970107	US 1995-427160	19950424
US 5594009	A	19970114	US 1995-452335	19950526
US 5705511	A	19980106	US 1995-526798	19950911
AU 9539986	A1	19960506	AU 1995-39986	19951003
AU 705306	B2	19990520		
EP 785938	A1	19970730	EP 1995-938713	19951003
EP 785938	B1	20020102		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
BR 9509348	A	19971104	BR 1995-9348	19951003
JP 2001509775	T2	20010724	JP 1996-513289	19951003

	AT 211472	E	20020115	AT 1995-938713	19951003
	FI 9701479	A	19970611	FI 1997-1479	19970409
	NO 9701677	A	19970611	NO 1997-1677	19970411
PRAI	US 1994-323755	A	19941014		
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	US 1995-452335	A	19950526		
	US 1995-526798	A	19950911		
	WO 1995-US12761	W	19951003		
OS	MARPAT 125:114935				
GI					



AB The title compds. [I; E1 and E2 are 6-membered carbocyclic arom. rings in which 1-3 carbon atoms may be replaced by N, or 5-membered carbocyclic arom. rings in which one carbon atom is replaced with O, N, or S, or 2 carbon atoms are replaced with S and N or O and N; A1 = A2 = H, A1A2 = O, etc.; B1 = B2 = H, B1B2 = O, etc.; R1 = H, alkyl, heteroaryl, aralkyl, aryl, etc.; R2 = H, alkyl, alkenyl, alkynyl, SO₂-R₉, CO₂-R₉, CO-R₉ where R₉ = alkyl, aryl; R3-R6 = H, aryl, F, Cl, Br, iodo, cyano, CF₃, NO₂, OH, etc.; X = (un)substituted alkylene of 1-3 carbon atoms, vinylene, SO₂, CO, etc.], inhibitors of protein kinase C and protein tyrosine kinase and therefore useful for cell growth, cell hyperproliferation inhibition, and inflammation inhibition, are prepd. Thus, 4c,7a,7b,12a-tetrahydro-6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]carbazole-5,7(5H,7H)-dione, prepd. from 2-(2-indenyl)indole and maleimide, was treated with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone in toluene to give the title compd. 6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]carbazole-5,7(5H,7H)-dione. In an assay based on reported by Kikkawa Et al. (1982) this had an IC₅₀ of 0.07 .mu.M against protein kinase C.

L10 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS

AN 1996:35030 CAPLUS

DN 124:202228

TI Fused pyrrolocarbazoles useful for enhancing the function/survival of neuronal cells and inhibition of protein kinase, inflammation response, and hyperproliferative cell growth

IN Hudkins, Robert L.; Knight, Jr Ernest

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SO U.S., 33 pp.

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PI	US 5475110	A	19951212	US 1994-323755	19941014
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	US 5705511	A	19980106	US 1995-526798	19950911
	WO 9611933	A1	19960425	WO 1995-US12761	19951003

W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP,

KR, KZ, LK, LT, LV, MG, MX, NO, NZ, PL, RO, RU, SG, SK, TJ, TT,
UA, UZ, VN

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AU 9539986 A1 19960506 AU 1995-39986 19951003

AU 705306 B2 19990520

EP 785938 A1 19970730

EP 1995-938713 19951003

EP 785938 B1 20020102

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
BR 9509348 A 19971104 BR 1995-9348 19951003

EP 1088823 A1 20010404

EP 2000-204170 19951003

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, LT, LV

JP 2001509775 T2 20010724

JP 1996-513289 19951003

AT 211472 E 20020115

AT 1995-938713 19951003

FI 9701479 A 19970611

FI 1997-1479 19970409

NO 9701677 A 19970611

NO 1997-1677 19970411

PRAI US 1994-323755 A2 19941014

US 1995-427160 A2 19950424

US 1995-452335 A2 19950526

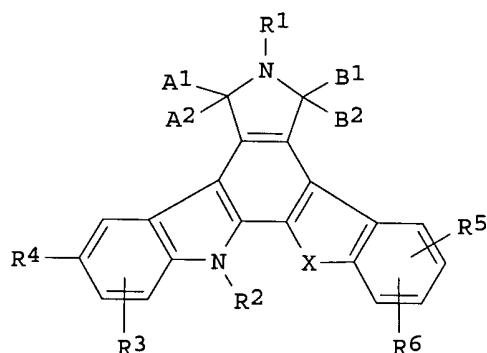
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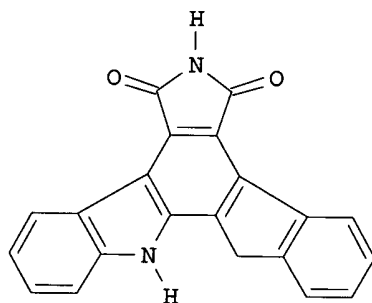
WO 1995-US12761 W 19951003

OS MARPAT 124:202228

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I



II

AB Disclosed herein are fused pyrrolocarbazoles I wherein: R1 = e.g., H, alkyl of 1-4 carbons, aryl, arylalkyl, heteroaryl, heteroarylalkyl; R2 = H, SO2R9, CO2R9, COR9, alkyl of 1-8 carbons, alkenyl of 1-8 carbons, alkynyl of 1-8 carbons, and a monosaccharide of 5-7 carbons wherein each hydroxyl group of said monosaccharide is independently selected from the group consisting of unsubstituted hydroxyl group and a replacement moiety replacing said hydroxyl group; R9 is selected from the group consisting of alkyl of 1-4 carbons, and aryl; R3, R4, R5, and R6 are each independently

selected from the group consisting of, e.g., H, aryl, heteroaryl, F, Cl, Br, I, CN, CF₃, NO₂, OH, OR₉; X = e.g., (un)substituted alkylene of 1-3 carbons; (A1,A2) = e.g., (H,H), O, S; (B1,B2) = e.g., (H,H), O, S; with the proviso that at least one of the pairs (A1,A2) or (B1,B2) is O, useful for enhancing the function/survival of neuronal cells and inhibition of protein kinase, inflammation response, and hyperproliferative cell growth. Thus, e.g., 6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]carbazole-5,7(5H,7H)-dione II was prepd. via Diels-Alder cycloaddn. of 2-(2-indenyl)indole (prepn. given) with maleimide followed by aromatization of the resultant 4c,7a,7b,12a-tetrahydro-6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]carbazole-5,7(5H,7H)-dione. II exhibited a 148% increase (over control) of spinal chord Chat (choline acetyltransferase) activity in the dissocd. rat embryonic spinal cord culture assay, and an IC₅₀ = 0.07 .mu.M for inhibition of protein kinase C.

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L10 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2002 ACS

IT 174349-11-2P 174349-21-4P 174349-29-2P

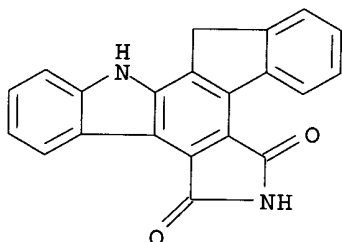
174349-35-0P 174349-53-2P 174349-87-2P

RL: BAC (Biological activity or effector, except adverse); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(fused pyrrolocarbazoles useful for enhancing the function/survival of neuronal cells and inhibition of protein kinase, inflammation response, and hyperproliferative cell growth)

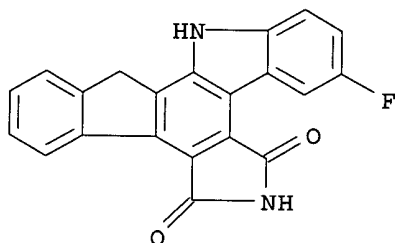
RN 174349-11-2 CAPLUS

CN 5H-Indeno[2,1-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione, 12,13-dihydro-(9CI) (CA INDEX NAME)



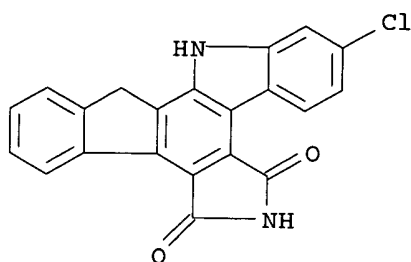
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CN 5H-Indeno[2,1-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione, 9-fluoro-12,13-dihydro- (9CI) (CA INDEX NAME)

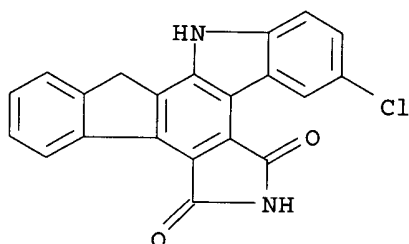


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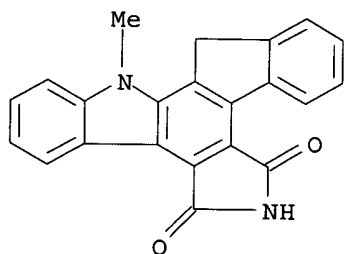
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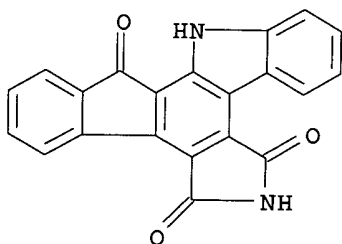
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 9-chloro-12,13-dihydro- (9CI) (CA INDEX NAME)



RN 174349-53-2 CAPLUS
 CN 5H-Indeno[2,1-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione,
 12,13-dihydro-12-methyl- (9CI) (CA INDEX NAME)



RN 174349-87-2 CAPLUS
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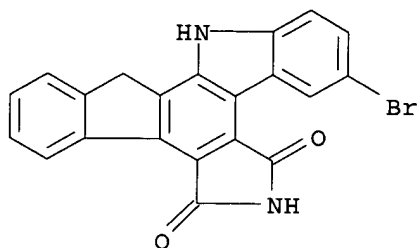
IT 174349-36-1P 174349-44-1P 174349-45-2P
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 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(fused pyrrolocarbazoles useful for enhancing the function/survival of neuronal cells and inhibition of protein kinase, inflammation response, and hyperproliferative cell growth)

RN 174349-36-1 CAPLUS

CN 5H-Indeno[2,1-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione,
9-bromo-12,13-dihydro- (9CI) (CA INDEX NAME)



RN 174349-44-1 CAPLUS

CN 5H-Indeno[2,1-a]pyrrolo[3,4-c]carbazole-5,7(6H)-dione,
3-bromo-12,13-dihydro- (9CI) (CA INDEX NAME)

